

Amendments to the Drawings:

The attached sheets of drawings include Figure 6. This figure was added in response to Examiner's objections under 37 CFR 1.83(a). No new matter has been added. These sheets, which include Figures 1-6, replace the previous sheets.

Attachment: Replacement Sheet

Remarks

In the Final Office Action, Examiner objected to the drawings under 37 CFR 1.83(a). Examiner rejected claims 5, 20, and 28 under 35 U.S.C. 112 first paragraph. Examiner rejected claims 5, 7, 8, and 28 under 35 U.S.C. 112 second paragraph. Examiner rejected claims 1, 2, 4-8, 11, 13-15, 18-21, 23, 24, 27-29, 36, and 40 under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,391,020 (Kurtz). Examiner rejected claim 12 under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,605,453 (Ozkan) in combination with Kurtz.

Examiner object to the drawings under 37 CFR 1.83(a). By this Amendment, Applicant's Attorney submits that the drawings comply with 37 CFR 1.83(a). No new matter has been added. Figure 6 depicts certain features of the invention in block diagram flow chart form. Blocks 120 and 122 correspond to claim 20.

Applicant's Attorney amended claims 1, 7, 8, and 21. No new matter has been added.

Kurtz fails to anticipate amended claims 1 and 21. Claims 1 and 21 generally include the limitation propagating the at least on acoustic wave through the material to a surface of the microbubble to controllably manipulate the microbubble within the material without causing the destruction of the microbubble. In contrast, "[u]nder the influence of the ultrasound beam 70, the gas inside the cavitation nucleus 45 expands, causing the cavitation nucleus to explode." (Col. 4, lines 43-45). Moreover, Kurtz does not "controllably manipulate" its cavitation nucleus. Kurtz, instead, merely causes its "cavitation nucleus to explode." (Col. 4, lines 43-45).

Claims 2, 4-8, 11-15, and 18-19 depend from claim 1. Claims 21, 23-24, 27-29, 36, and 40 depend from claim 20. For at least the reasons claim 1 and 21 are patentable, claims 2, 4-8, 11-15, 18-19, 21, 23-24, 27-29, 36, and 40 are patentable. Claims 2, 4-8, 11-

15, 18-19, 21, 23-24, 27-29, 36, and 40 have limitations beyond their respective independent claims providing further reason that claims 2, 4-8, 11-15, 18-19, 21, 23-24, 27-29, 36, and 40 are patentable.


Kurtz and Ozkan fail to render obvious claim 12. For at least the above reasons, Kurtz and Ozkan fail to disclose each and every element of claim 12. For at least the above reasons, Kurtz teaches away from Applicant's invention. Ozkan teaches away from Applicant's invention because Ozkan uses electrostatic patterning via a patterned electrode: "a patterned electrode having an opposite, second, polarity under force of an applied electric field." (Abstract). Applicant's invention, in contrast, uses acoustic radiative forces: "[t]he microbubble can be manipulated with either continuous-wave or pulsed ultrasound sources . . . the radiation force on the microbubble can be significant since it is an ideal acoustic reflector." (Col. 6, ll. 16-21). Ozkan and Applicant's invention use fundamentally different phenomena.

Applicant's Attorney respectfully submits that the application is in condition for allowance. Applicant's Attorney requests a notice to that effect. Applicant's Attorney also invites a telephone conference if the Examiner believes it will advance the prosecution of this application.

Please charge any additional fees or credit any overpayment as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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